

the species represented as in their general grouping and the appearance of the area. The almost complete absence of shrubs, the dominance of grasses, and the level topography combine to give it a strong resemblance to a hydrophytic prairie of northern Illinois. Indeed it may be assumed that this area represents a relic colony of prairie plants, persisting from a time when prairies occupied a wide extent in southern Michigan, and now somewhat mixed with various marsh species which have immigrated in recent times from the neighboring swamps and bogs.

Paper no. 157 from the BOTANICAL LABORATORY
OF THE UNIVERSITY OF MICHIGAN.

REMARKS ON SEVERAL NORTH AMERICAN SPECIES OF ALOPECURUS.

HAROLD ST. JOHN.

A THOROUGH study of abundant material and dissections of spikelets from each specimen have made it clear to the writer that *Alopecurus geniculatus* L. and *A. aristulatus* Michx.¹ have constant characters and should be treated as distinct species:

A. aristulatus Michx. is a native of northern Europe, Asia, and in America from the region of the Gulf of St. Lawrence south to Maryland and west to the Pacific slope. It has a short straight awn attached to the back of the lemma midway between its top and base. The awn is included in or slightly extruded beyond the glumes. Mature spikelets measure from 2–2.2 mm. in length.

A. geniculatus L., a native of northern Eurasia, has a long exserted twisted awn attached near the base of the lemma, usually one quarter of the distance from its base to its summit. Mature spikelets of this species measure 3 mm. in length. The drawings in Britton & Brown's

¹ *A. fulvus* Sm. Eng. Bot. xxi. 1, 467 (1805) is synonymous with *A. aristulatus*, and is often taken up for it on the basis of having been published in 1790, as the first volume of Smith's English Botany was, but volume xxi in which the original description and plate appeared was published in 1805. *A. aristulatus* was published by Michaux in his Fl. Bor.-Am. i. 43 (1803).

Illustrated Flora¹ illustrate clearly the spikelet-differences between *A. aristulatus* and *A. geniculatus*. Although rather common in eastern North America, *A. geniculatus* does not seem to occur far away from the habitations or works of man, and it does not seem to be a native.

A series of specimens from the Coastal Plain, from eastern Massachusetts southward to Florida and Texas, and northward in the Mississippi valley to Madison, Wisconsin, have the habit and even the exact awn-characters of *A. geniculatus*, but instead of having spikelets 3 mm. in length, as does that species, these coastal plain specimens have the mature spikelets 2-2.4 mm. in length. The measurements in all these cases apply to the length of the glumes, and do not include the awn. With the exception of the range these plants seem to have no other difference but the size of the spikelet to separate them from the European *A. geniculatus*. Consequently, it is deemed best to treat this plant as an American variety. The labels of the twenty-six sheets of this plant at hand are tantalizingly inadequate in regard to the statement of habitat. The inference is, however, that this plant is a native of North America. Certainly there are no old world species or varieties into which it fits.

Walter described an *A. carolinianus*,² which may have been the plant in question, the *A. geniculatus* of current manuals of the botany of the southern states. Walter's description is unfortunately too brief to be capable of exact interpretation. Prof. A. S. Hitchcock in his article on "The Identification of Walter's Grasses"³ reports that no specimen of this exists in Walter's herbarium, although Pursh seems to have seen it there before publishing his *Flora Americae Septentrionalis* in 1814. Dr. Gray examined and made notes concerning Walter's plants in February, 1839, but he did not consider the grasses. After a discussion of the conflicting evidence about *A. carolinianus*, Hitchcock concludes, "This species must remain doubtful."

In 1808 Poiret described⁴ as a new species *A. ramosus*, giving its characters in great detail. These were drawn from a specimen collected by Bosc in Carolina. This is surely the coastal plain *Alopecurus* under discussion. Further confirmation of this is given by Steudel⁵ who maintains Poiret's species *A. ramosus*, cites the Bosc specimen

¹ Ill. Fl. ed. 2, i. 192 (1913).

² Walter, Thomas: *Flora Caroliniana*, 74 (1788).

³ Ann. Rep. Missouri Bot. Gard. xvi. 40 (1905).

⁴ Poir. in Lamarck: *Encyclopedie Methodique Botanique*, viii. 776 (1808).

⁵ Steudel, E. G.: *Synopsis Pl. Graminearum*, i. 147-8 (1854).

from Carolina, and adds one other, "N. Orleans. *Drummond*." Fortunately there is in the Gray Herbarium a specimen of this latter, and it is without any question the southern plant with small spikelets. All doubt as to the application of the name *A. ramosus* being removed, the new combination is made below.

ALOPECURUS GENICULATUS L., var. **ramosus** (Poir.), n. comb. *A. ramosus* Poir. in Lamarck, Encyc. Meth. Bot. viii. 776 (1808).

TYPE SPECIMEN: CAROLINA: *Bosc*.

SPECIMENS EXAMINED (all in the Gray Herbarium or the Herbarium of the New England Botanical Club). MASSACHUSETTS: path by ditch, Great Meadows, 20 rods east of rocky island, Concord, July 7, 1859, *H. D. Thoreau*. CONNECTICUT: Rocky Hill, June 15, 1894, *Frances Wilson Starmer*; wet places, common, Rocky Hill, May 28, 1894, *Frances Wilson Starmer*, Grasses of Conn., no. 59. PENNSYLVANIA: meadows near Philadelphia, July, 1876, *Isaac C. Martindale*. VIRGINIA: in roadside ditch, Buckroe, May 18, 1912, *B. L. Robinson*, no. 417. SOUTH CAROLINA: damp clay soils, Santee Canal, April, *H. W. Ravenel*. GEORGIA: Chattahoochie, May 2, 1899, *Wm. M. Canby*. FLORIDA: *Chapman*; 1843, *F. Rugel*, no. 223. MISSISSIPPI: Starkville, April 19, 1892, *S. M. Tracy*, no. 1396. LOUISIANA: New Orleans, *Drummond*, *Riddell*; common in wet ground, Gretna, April 19, 1899, *C. R. Ball*, no. 303. TEXAS: *Wright*; Terrell, May 5, 1904, *F. J. Tyler*. TENNESSEE: damp ground, Jackson, April, 1893, *Samuel M. Bain*, no. 212. OKLAHOMA: Huntsville, April 20, 1896, *Laura A. Blankinship*; at grassy edge of springy creek, Alva, May 1 and 20, 1914, *G. W. Stevens*, nos. 3,018 & 3,044; edge of small pond, Whitehorse, April 30, 1913, *G. W. Stevens*, no. 243; at edge of pond, Cherokee, May 24, 1913, *G. W. Stevens*, no. 643. KANSAS: low ground, Riley Co., May 21, 1895, *J. B. Norton*, no. 600. IOWA: Mt. Pleasant, July 18, 1894, *J. H. Mills*. ILLINOIS: wet lands, Athens, 1861, *E. Hall*; damp heavy ground, Peoria, July, 1903, *F. E. McDonald*; moist soil, Wady Petra, June 13, 1899, *Virginus H. Chase*, Amer. Gr. Nat. Herb. no. 335. WISCONSIN: Madison, *T. J. Hale*.

GRAY HERBARIUM.

VERNONIA ALTISSIMA Nutt. var. **taeniotricha**, var. nov.—Caulis et panicula plus minusve sordide pilosa pilis laxe curvatis multiloculatis; folia supra sparse et sordide pubescentia infra ad costam patentipilosa ad venas laterales patentipilosula pilis laxis sordidis multiloculatis.—INDIANA: in a prairie habitat, along the Lake Erie Railway, west of Goldsmith, Tipton Co., 26 Aug. 1913, *Mrs. Chas. C. Deam* 14,114; low border of swamp about 6 km. east of Columbia City, Whitley Co., 23 Aug. 1914, *Chas. C. Deam* 14,539 (TYPE in Gray Herb.). ILLINOIS: roadside, Urbana, 23 Sept. 1909, *A. S.*